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SEQUENCE LISTING

(1) GENERAL INFORMATION:

- (i) APPLICANT: University of Nebraska Board of Regents
- (ii) TITLE OF INVENTION: Compositions and Methods for Enhancing Immune Responses Mediated by Antigen-Presenting Cells
- (iii) NUMBER OF SEQUENCES: 11
- (iv) CORRESPONDENCE ADDRESS:
 - (A) ADDRESSEE: Dann, Dorfman, Herrell and Skillman
 - (B) STREET: 1601 Market Street Suite 720
 - (C) CITY: Philadelphia
 - (D) STATE: PA
 - (E) COUNTRY: USA
 - (F) ZIP: 19103-2307
- (v) COMPUTER READABLE FORM:
 - (A) MEDIUM TYPE: Floppy disk
 - (B) COMPUTER: IBM PC compatible
 - (C) OPERATING SYSTEM: PC-DOS/MS-DOS
 - (D) SOFTWARE: PatentIn Release #1.0, Version #1.30
- (vi) CURRENT APPLICATION DATA:
 - (A) APPLICATION NUMBER: 09/051,685
 - (B) FILING DATE: 17-APRIL-1998
 - (C) CLASSIFICATION:
- (vii) RELATED APPLICATION DATA:
 - (A) APPLICATION NUMBER: PCT US96/16825
 - (B) FILING DATE: 18-OCT-1996
- (vii) RELATED APPLICATION DATA:
 - (A) APPLICATION NUMBER: 60/005,727
 - (B) FILING DATE: 20-OCT-1995
- (viii) ATTORNEY/AGENT INFORMATION:
 - (A) NAME: Reed, Janet E.
 - (B) REGISTRATION NUMBER: 36,252
 - (C) REFERENCE/DOCKET NUMBER: UNMC 63102US
- (ix) TELECOMMUNICATION INFORMATION:
 - (A) TELEPHONE: (215) 563-4100
 - (B) TELEFAX: (215) 563-4044

(2) INFORMATION FOR SEQ ID NO:1:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 10 amino acids
 - (B) TYPE: amino acid

(C) STRANDEDNESS: not relevant
 (D) TOPOLOGY: not relevant

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(ix) FEATURE:

(A) NAME/KEY: Modified-site

(B) LOCATION: 9

(D) OTHER INFORMATION: /note= "The alanine in position 9 is a D-amino acid."

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:

Tyr	Ser	Phe	Lys	Pro	Met	Pro	Leu	Ala	Arg
1				5					10

(2) INFORMATION FOR SEQ ID NO:2:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 19 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: not relevant

(D) TOPOLOGY: not relevant

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(ix) FEATURE:

(A) NAME/KEY: Modified-site

(B) LOCATION: 18

(D) OTHER INFORMATION: /note= "The alanine in the 18th position is a D-amino acid."

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:

Tyr	Lys	Gln	Gly	Gly	Phe	Leu	Gly	Leu	Tyr	Ser	Phe	Lys	Pro	Met	Pro
1				5				10						15	
Leu Ala Arg															

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(2) INFORMATION FOR SEQ ID NO:3:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 39 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: not relevant
- (D) TOPOLOGY: not relevant

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:3:

His	Gly	Thr	Val	Ile	Glu	Ser	Leu	Glu	Ser	Leu	Asn	Asn	Tyr	Phe	Asn
1				5					10					15	
Phe	Phe	Gly	Ile	Asp	Val	Glu	Glu	Lys	Ser	Leu	Phe	Leu	Asp	Ile	Trp
			20					25					30		
Arg	Asn	Trp	Gln	Lys	Asp	Gly									
			35												

(2) INFORMATION FOR SEQ ID NO:4:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 39 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: not relevant
- (D) TOPOLOGY: not relevant

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:

Gln	Asp	Pro	Tyr	Val	Lys	Glu	Ala	Glu	Asn	Leu	Lys	Lys	Tyr	Phe	Asn
1				5					10					15	
Ala	Gly	His	Ser	Asp	Val	Ala	Asp	Asn	Gly	Thr	Leu	Phe	Leu	Gly	Ile
			20					25					30		

Leu Lys Asn Trp Lys Glu Glu
35

(2) INFORMATION FOR SEQ ID NO:5:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 19 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: not relevant
- (D) TOPOLOGY: not relevant

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(ix) FEATURE:

- (A) NAME/KEY: Modified-site
- (B) LOCATION: 9
- (D) OTHER INFORMATION: /note= "The alanine in position 9 is a D-amino acid."

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:5:

Tyr	Ser	Phe	Lys	Pro	Met	Pro	Leu	Ala	Arg	Tyr	Lys	Gln	Gly	Gly	Phe
1				5					10					15	

Leu Gly Leu

(2) INFORMATION FOR SEQ ID NO:6:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 9 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: not relevant
- (D) TOPOLOGY: not relevant

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:6:

Tyr Lys Gln Gly Gly Ph Leu Gly Leu
1 5

(2) INFORMATION FOR SEQ ID NO:7:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 20 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: not relevant
- (D) TOPOLOGY: not relevant

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:7:

Gly Val Thr Ser Ala Pro Asp Thr Arg Arg Ala Pro Gly Ser Thr Ala
1 5 10 15

Pro Pro Ala His
20

(2) INFORMATION FOR SEQ ID NO:8:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 12 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: not relevant
- (D) TOPOLOGY: not relevant

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(ix) FEATURE:

- (A) NAME/KEY: Modified-site
- (B) LOCATION: 2
- (D) OTHER INFORMATION: /note= "The Xaa at position 2 is

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aminohexanoic acid."

(ix) FEATURE:

- (A) NAME/KEY: Modified-site
- (B) LOCATION: 9
- (D) OTHER INFORMATION: /note= "The alanine in position 9 is a D-amino acid."

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:8:

Lys Xaa Tyr Ser Phe Lys Pro Met Pro Leu Ala Arg
1 5 10

(2) INFORMATION FOR SEQ ID NO:9:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 20 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: not relevant
- (D) TOPOLOGY: not relevant

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:9:

Phe Pro Gly Trp Ala Glu Pro Asp Ser Asn Gly Ser Ala Gly Ser Glu
1 5 10 15
Asp Ala Gln Leu
20

(2) INFORMATION FOR SEQ ID NO:10:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 30 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: not relevant
- (D) TOPOLOGY: not relevant

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(ix) FEATURE:

(A) NAME/KEY: Modified-site

(B) LOCATION: 29

(D) OTHER INFORMATION: /note= "The alanine in position 29 is a D-amino acid."

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:10:

Phe Pro Gly Trp Ala Glu Pro Asp Ser Asn Gly Ser Ala Gly Ser Glu
1 5 10 15

Asp Ala Gln Leu Tyr Ser Phe Lys Pro Met Pro Leu Ala Arg
20 25 30

(2) INFORMATION FOR SEQ ID NO:11:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 19 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: not relevant

(D) TOPOLOGY: not relevant

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:11:

Gly Asp Leu Ser Asp Pro Cys Gly Asn Arg Thr Arg Leu Gly Gly Arg
1 5 10 15

Asp Ser Leu